IN THE SPECIFICATION

Replace paragraph 0038 with the following:

[0038] Depending upon the particular implementation, either left ventricular EDV, right ventricular EDV or overall ventricular EDV is employed. As noted above, the term ventricular EDV, as it is used herein, refers to any suitable measure of the EDV associated with the ventricles, including right ventricular EDV, left ventricular EDV or combined right and left ventricular EDV. Moreover, ventricular EDV need not be measured at the very end of the diastolic phase of the cardiac cycle. Rather, a value representative of ventricular EDV may be detected, for example, during a pre-ejection period subsequent to a ventricular depolarization (i.e. ventricular volume after active filling), during an interval just prior to an atrial contraction (i.e. ventricular volume after [[active]] passive filling), or during delivery of a ventricular pacing pulse (V-pulse.) In each case, the ventricles are substantially full and so a measure of the ventricular volume during these intervals can be taken to be representative of ventricular EDV. Typically, left ventricular EDV is about 150 milliliters (ml) and right ventricular EDV is about 165 ml for a healthy, adult heart. Hence, the total ventricular EDV is about 315 ml. If heart failure is occurring, ventricular EDV is typically higher. Note also that the difference between the ventricular volumes after active and passive filling serves as a good indicator of atrial function.

Replace paragraph 0042 with the following:

[0042] The left ventricular EDV is substantially at its maximum (indicating that the left ventricle is substantially full) during an interval extending from just prior to an atrial contraction (i.e. near the end of phase 7) through a pre-ejection interval (phase 2) to the end of the diastolic phase (i.e. the very end of phase 2), with only relatively minimal variations in volume during this entire interval of time. Accordingly, any measure of ventricular volume during this interval of time is generally representative of the maximum volume achieved by the ventricles and hence is generally representative of [[ESV]] EDV. Moreover, during these intervals, the ventricular volume remains

substantially constant, i.e. there is little or no change or gradient in volume. Accordingly, this represents an ideal interval of time for detecting ventricular volume values that can be reliably compared from one cardiac cycle to another. In other words, by detecting ventricular volume during intervals wherein there is little or no gradient in the volume, changes in heart rate and cardiac rhythm morphology will not substantially affect the detected values -- particularly when averaged over multiple respiration cycles -- thus permitting reliable comparison of averaged values of over time. Thus, in one illustrative embodiment, the timing of the ventricular volume measurement can be based on an IEGM signal, such as a following an atrial event or a ventricular event. Also, the system may take a plurality of measurements during each cycle, for example after detecting a suitable IEGM signal, and taking the maximum value as the best representation of the EDV.

Replace paragraph 0079 with the following:

[0079] At step 504, a baseline point is selected within the detection window for use in sensing a baseline ventricular EDV value. As before, the baseline point may be set anywhere within the detection window but is preferably set consistently from one beat to the next. In one example, the baseline point is set 30 milliseconds prior to a next expected P-wave/A-pulse. Next, at step 506, a low magnitude impedance sensing pulse is delivered at the selected baseline point. An exemplary low magnitude pulse is 507 is shown in FIG. 11. The use of a low magnitude pulse is particularly important during the interval prior to the atrial contraction, to prevent triggering of either an atrial or ventricular contraction, since neither the atria [[now]] <u>nor</u> the ventricles are refractory during that interval.